

Unimas develops qiblat indicator app for Android

KOTA SAMARAHAN: Universiti Malaysia Sarawak's (Unimas) latest innovation ensures that Muslims can now know the direction of the *qiblat* at any time and place.

Utilising augmented reality (AR) technology, the university's Centre for Semantic Technology and Augmented Reality (CoeSTAR) at the Faculty of Cognitive Sciences and Human Development has developed the Mobile Augmented Reality-Solat (Mobile AR-Solat) Android app.

The team responsible for the app, which has won the Gold Medal at the British Innovation Show last year, is

led by Dr Ng Giap Weng.

A *qiblat* indicator is a specialised compass used to locate the side Muslims face when performing prayers. In this case, the direction points to the Ka'abah in Mecca.

The direction of prayer is indicated by marks on the perimeter of the dial, corresponding to different cities, or by a second pointer set by the users according to their own location. To determine the proper direction, one has to know with some precision both the longitude and latitude of one's own location and that of Mecca.

The Mobile AR-Solat makes it easier

for users to locate the *qiblat* direction by automatically identifying the location of the user and then generating the coordination of the *qiblat*. When outdoors, the *qiblat* coordinate is generated using the integrated global positioning system phone antenna while indoors require Wi-Fi or a network provider.

A special function of the Mobile AR-Solat is the ability to see the *qiblat* direction being superimposed over the real environment. To utilise this function, the user needs to open the camera view. When the user looks at the surroundings through the camera

view, he is able to see an arrow superimposed on the background showing the bearing of the *qiblat*.

The application also enables the user to request for the prayer time. The application will calculate the five different prayer times for the day based on the location of the device, the time, date and the position of the sun. This information will then be displayed on the screen.

Another function of Mobile AR-Solat is showing the direction and distance to the most interesting content located nearby such as famous mosques, restaurants and hotels.

This is also displayed as images superimposed on the environment. This effectively turns Mobile AR-Solat into a potent location-based search and discovery service with an augmented reality element.

The combination of augmented reality with cell phone technology represents a dramatically new development in applications for Android and smartphones. Augmented reality has added unique functions to the conventional *qiblat* indicator making the Mobile Augmented Reality-Solat an especially useful tool with a wow factor.